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ABSTRACT

A study examined age differences in the use of interaction management strategies. Students (13 seventh-graders and 24 eleventh-graders) were asked to describe how to play a game to a peer. Each speaker then became a listener in the next dyad. A tally was kept of speaker and listener use of six categories of feedback, and the quality of that feedback was assessed by assigning strategies specific values based on the assumption that specific feedback strategies result in a higher quality of interaction. The results showed that half the speakers did not seek any indication of listener comprehension, and a mere 14% attempted to obtain a specific sign of understanding. Seventy-five percent of the seventh grade speakers failed to seek indications of general listener understanding, as opposed to 21% of the eleventh grade students, indicating that the older students were much more likely to seek signs of general understanding. Findings revealed no similar effect, however, for the use of strategies to establish a more specific understanding. Although indicating that a slight developmental trend in interaction management skills exists, findings indicated a lack of competence even at the eleventh grade, suggesting a need for training programs to encourage more frequent attempts at feedback management. (Extensive tables of data are appended.) (HTH)

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THE DEVELOPMENT OF INTERACTION MANAGEMENT SKILLS IN EARLY AND LATE ADOLESCENCE

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ABSTRACT

THE DEVELOPMENT OF INTERACTION MANAGEMENT SKILLS IN EARLY AND LATE ADOLESCENCE

This paper reports the results of a study designed to investigate age differences in the use of interaction management strategies. A hierarchy of feedback strategies was designed with which to explore strategy use by seventh- and eleventh-graders while performing a descriptive task. Results suggest that while both speakers and listeners only infrequently utilize feedback opportunities, there is a clear pattern of increasing strategy usage between seventh- and eleventh-grade levels. Educational implications are discussed in terms of curriculum development and future research.

THE DEVELOPMENT OF INTERACTION MANAGEMENT SKILLS

IN EARLY AND LATE ADOLESCENCE

Interaction management has been singled out as a critical discourse ability necessary to effective communication (Whitehurst & Sonnenshein 1981; Flavell et al. 1968). That is, to communicate effectively requires the ability to give and utilize feedback by both speakers and listeners. There is evidence that the amount of interaction management measured by the amount of feedback increases with age (Meissner 1975; Glucksberg & Krauss 1967). If interaction management is fundamental to communication effectiveness and if interaction management skills increase with age, it should follow that communication effectiveness advances correspondingly with age. Such increases in communication effectiveness with age in accurately conveying information to another have in fact been shown by a number of researchers (e.g. Flavell et al. 1968; Krauss & Glucksberg 1970).

The evidence for the link between interaction management and accuracy of information conveyed is less clear. The degree to which sophistication in informative communication tasks is tied to interaction management skills is tenuous. This is true primarily because adolescent informative messages have not been coded in terms of functional strategies reflecting different levels of interaction management abilities. This is in contrast to persuasive messages which are being examined in this manner (e.g. Clark & Delia 1976).

The present study, by contrast, focused directly upon the question of whether informational strategies reflecting progressively higher levels of interaction management skill increase with age. Thus the design of the study required development of a hierarchy of interaction management strategies such that higher-level strategies reflect greater skill in interaction management. Adolescents were asked to perform an informational task. The messages were

subsequently coded into these categories. If in fact interaction management skills are developmental, then older adolescents should use higher order strategies than do younger adolescents. In addition to this primary hypothesis, the study also tested a subsidiary hypothesis: older adolescents will use a greater number of interaction management strategies than will younger adolescents.

Method

Subjects

Participants in the study were seventh- and eleventh-grade students at a Midwestern junior and senior high school. The research involved thirteen seventh-graders and twenty-four eleventh-graders. All subjects were volunteers.

The seventh-grade students were drawn from four self-contained classrooms. These classes represented all ability levels. All seventh-grade volunteers whose parents returned letters of permission were included.

The eleventh-grade students were enrolled in English classes. To assure that the full range of ability levels was represented both the Survey of Literature class for college-bound students and the Myth class for non-college-bound students were included. All eleventh-graders who volunteered to participate and whose parents did not object to their involvement participated. The larger number of eleventh-grade participants reflects the difference in the parental permission procedure.

Experimental Task

An experimental communication task that every participant could potentially perform and that was relevant to the daily lives of the students was needed. The task selected was that of describing how to play a game to a peer.

A list was made of games commonly played by junior and senior high school students. The sixty-two games were divided into board games, card games, and

other. A week before the experiment was to begin volunteer students were asked to fill out a game sheet consisting of the list of games and the directions, "Place a check in front of any game you know how to play well enough to explain to another student." The game a specific participant was allowed to select to describe in the experimental session was drawn from those he or she had identified in this pre-experimental questionnaire as one about which sufficient knowledge was possessed for explanation. This procedure was adopted to assure that there was relative similarity across speakers in their knowledge of the specific game explained. In addition, a test was made of the relative difficulty levels of the games selected across age groups. The sixty-two games were classified as of low, medium, and high difficulty levels by the experimenter. Scores from one to three for these three difficulty levels were then assigned to the games actually selected, and these scores were analyzed. No statistically significant effect for game difficulty was shown.

Procedures

Subjects were seated at a table with a tape recorder present. The speaker was instructed to:

> Choose a game from the game list that you know how to play well and your partner does not know how to play. The two of you will have a conversation sitting opposite each other in which you will explain how the game is played. When you are through you should be certain your partner knows how to play the game.

Listeners were told that.

> Your classmate is going to explain how to play a game. You should try to be as good a partner as you can. Act like you would in a normal conversation. Your goal is to try and understand the game well enough to be able to play it.

Each speaker became the listener in the next dyad.

Coding system

A set of dependent variables was developed which indexed the quality of interactional feedback for both speakers and listeners. Two categories of feedback were identified for speakers:

1. Seeks general signs of understanding. Example: "Do you follow?"
2. Seeks specific signs of understanding. Example: "Do you understand how the men move?"

Four categories of feedback were identified for listeners:

1. Gives general signs of understanding. Example: "OK, I understand."
2. Seeks general clarification. Example: "What do you mean?"
3. Seeks specific clarification. Example: "Do you mean all the pieces count the same?"
4. Verifies understanding by repeating what the speaker said. Example: "Let me see if I understand, the men all..."

A tally was made for each speaker and listener in the interaction cells for each of the six categories. Each subject received an overall score for amount of verbal feedback based upon the number of times he/she used any of the six interaction strategies. Interreater realiability was established by exact agreement at .93 for the total score and .88, .96, .92, .96 for the four listener categories and .88, and 1.0 for the two speaker categories.

In addition, the quality of the feedback was assessed by ordering the strategies within hierarchies. The system used for the listener reflected movement from giving no indication of understanding (score 0), to giving a global indication of understanding (score 1), to seeking general clarification (score 2), to seeking specific clarification (score 3), and finally to verifying understanding (score 4). Similarly the system used for speakers reflected a movement from the absence of attempts to determine listener understanding (score 0), to seeking general signs of understanding (score 1), to seeking specific signs of understanding (score 2). Subjects' scores for the quality of feedback management were based upon the highest level strategy used.

The hierarchization was based upon the belief that more specific feedback strategies result in a higher quality of interaction that in turn results in clearer, better-adapted messages. For example, a speaker who concludes an explanation with a general question (Got it?") receives feedback indicating

only a gross measure of listener comprehension. Should the answer be nonaffirming, the speaker must then proceed to more specific questions in order to ascertain the topic requiring further treatment. In contrast, a speaker who follows a part of the game description with a specific question (Can you picture what the board looks like?") is in a better position to provide clarification should the listener's response indicate a need for it. Similarly, a listener who requests specific information ("How many squares are on the board?") is more likely to receive the needed information than one who asks a general question ("What do you mean?").

Results

Results of the analysis of the feedback management scores are reported separately for speakers and listeners. Each speaker received scores reflecting efforts to seek general and specific signs of listener understanding. The frequency of the speaker's effort to manage feedback was determined by tallying the number of times each speaker sought general or specific feedback. The frequencies are reported in Table 1.

Half the speakers did not seek any indication of listener comprehension. A mere fourteen percent attempted to obtain a specific sign of understanding.

Examination of the data revealed that the requests for general listener understanding involved a marked disparity in usage as a function of grade-level; seventy-five percent of the seventh-graders sought no indication of general listener understanding, while only twenty-one percent of the eleventh-graders failed to use this strategy. A 2 x 2 (grade-level by use/nonuse) Chi-square analysis revealed that eleventh-graders were much more likely to seek an indication of general understanding. There was no similar effect for the use of strategies to establish specific understanding (see Table 2).

A second score was given to each speaker based upon the highest level strategy used. Scores ranged from 0 (no management strategy used) to 1 (general strategy used) to 2 (specific strategy used). Frequencies and relevant Chi-square analyses are reported in Table 3 and 4. These results suggest not only that speakers exercise only minimal control over the feedback that they receive in general, but that in addition when feedback control strategies are used they are unlikely to involve an effort after specificity (see Tables 3 and 4).

Possible effects of grade-level and planning on speaker interaction management were examined by analyzing the scores for frequency and quality of feedback management in two-way analyses of variance. The results were statistically nonsignificant for both independent factors and their interaction for both the frequency and quality of feedback management scores.

As with speakers, both the frequency and quality of feedback management were investigated among listeners. Each listener received two scores. A tally was made of the number of times a listener used any of the four listener feedback management strategies identified. In addition, a score ranging from 0-4 was assigned depending upon the highest level strategy used. The frequency of listener use of feedback management strategies is reported in Table 5. Grade-level differences in the amount of listener feedback management are reported in Table 6.

By comparison with speakers, listeners were more active in indicating understanding and seeking clarification, with significantly more making at least one interaction management turn than not. This difference was significant (Chi-square = 7.81, $p<.01$). It is important to note, however, that over one-fourth of the listeners used no strategies and of those who did, the most common strategy was an indication of general understanding.

The level of listener feedback management based upon a hierarchization of the four interaction management strategies is summarized in Tables 7 and 8. All

strategy levels were used. It is encouraging to note that even the higher level strategies were in the repertoire of some listeners.

No significant effects were found for the total number of strategies used. However, there was a main effect for grade-level in the highest level strategy used ($F_{1,36} = 6.483$, $p < .016$), with a mean of 1.0 for seventh-graders and 2.32 for eleventh-graders. Similar findings were reported by Ironsmith and Whitehurst (1978) for grade-school children; older children used more specific questions than did younger ones. These findings seem to verify that the repertoire of feedback management strategies available to a listener increases with age. Although the frequency of feedback management might not significantly increase with age, the level of sophistication of strategy used does.

Discussion

The Frequency of Interaction Management

The results of the present study provide evidence of a developmental nature of interaction management skills of both speakers and listeners. While there was no statistically significant increase in feedback strategy usage, the descriptive data on each strategy showed a clear pattern of increasing strategy usage between seventh- and eleventh-grade levels, suggesting that age effects would be evident in a design with greater power (Table 9). It appears in this study that many adolescents did not use feedback opportunities when they existed.

This finding has numerous educational implications. If there is a developmental trend, the competence level nevertheless falls short at even the eleventh-grade level. It would appear that training programs are needed which encourage a developmental trend which would culminate in more frequent attempts at feedback management. Such programs could focus upon introducing junior and senior high school students to the concept of feedback and its use.

Various types of questioning techniques could be introduced into the speech or language arts classroom. Lessons could be developed using various levels of questions such as:

1. Diagnostic
   a. General - Do you understand?
   b. Specific - Do you understand how to...?
      What don't you understand?
2. Memory - What did I say would happen if you forget to...?
3. Reactive - How do you feel about that?
4. Evaluative - Am I making myself clear?

These could be used as a framework from which to teach the concept of comprehension checking.

Applications of feedback management could be taught in a range of contexts such as those listed by the Speech Communication Association in "Standards for Effective Oral Communication Programs."

a. a range of situations; e.g., informal to formal, interpersonal to mass communication.

b. a range of purposes; e.g., informing, learning, persuading, evaluating messages, facilitating interaction, sharing feelings, imaginative and creative expression.

c. a range of audience; e.g., classmates, teachers, peers, employers, family, community.

d. a range of communication forms; e.g., conversation, group discussions, interview, drama, debate, public speaking, oral interpretation.

e. a range of speaking styles; e.g., impromptu, extemporaneous, reading from a manuscript.

The Quality of Interaction Management

While differences in the frequency of use of interaction management strategies were not found to be statistically significant for either speakers or listeners, the level of strategy usage for listeners did show a main effect for grade level with eleventh-graders using more strategies than seventh-

graders. This probably reflects the commonly reported developmental increase in recognition, comparison, and sampling activities by listeners (Bearison & Levey 1977; Robinson & Robinson 1978; Karabenick & Miller 1977; Ironsmith and Whitehurst 1978).

The fact that speakers did not appear to follow the same developmental trend could indicate that listeners' feedback management skills receive more use and practice time (thus becoming routinized) than do speaker feedback management skills. It might be that listening skills are more easily self-taught because the results are more observable and direct for listeners as opposed to speakers. For example, a listener who is given test directions that are not clear quickly realizes the results of not seeking clarification by doing poorly on the test. In contrast, a speaker who tells someone how to perform a task may not know (or care!) how well the task is performed.

Educational implications are again apparent. Various strategies could be introduced and practiced in various contexts. It is easy to imagine classroom exercies that could measure and encourage higher levels of strategy usage. Junior high school students could begin with practice framing specific rather than general comments and questions. Tasks could move from referential communication to more abstract conceptualizations of ideas. High school students could be introduced to concepts such as perspective taking which would undergird the practice of using the strategies effectively.

Future Research

Two major areas of future research are implied by this study. One is further exploration of the role of speakers' and listeners' interaction management in communication competence. The referential literature has explored the relationship of interaction management to task accomplishment using primarily children and secondarily adults as subjects. Little work has been done with adolescents (Dickson 1981). In addition, the correlation between interaction management frequency and quality and other measures such

as subject attitude toward topic, attitude toward conversational partner, willingness to communicate, self concept, personality perception of other, and leadership, has remained unexplored.

The second major area requiring treatment is the training of interaction management skills. Programs need to be devised and tested to teach various interaction management strategies. Such programs should be continually modified to incorporate the findings of the first category of research. By continually adding to the understanding of interaction management and at the same time implementing and refining the pedagogical implications of the findings, speech teachers and researchers can work together to offer students an understanding of and skill in an important component of communicative competence.

The lines of research indicated above can be a response to Allen and Brown when they state,

> Our efforts have resulted in a call for research, a call for curriculum development and an entreaty that we renew our efforts in developing competence in communication among children and youth. But more important than these predictable calls for action is the perspective that led to them--a perspective that defines competence in communication by particular features that have specific instructional correlaries for classroom teachers (1977 p. 255).

TABLE 1

FREQUENCY OF THE SPEAKER'S FEEDBACK MANAGEMENT

Strategy	Frequency	Percentage
1. Seeks general signs of listener understanding		
Amount Score		
0	19	51%
1	12	32
2	4	11
3 or more times	2	5
2. Seeks specific signs of listener understanding		
0	32	87
1	4	11
2	1	3

N = 37

TABLE 2

GRADE-LEVEL DIFFERENCE IN THE FREQUENCY OF SPEAKER'S INTERACTION MANAGEMENT

Strategy	Seventh-Grade Frequency	Seventh-Grade Percentage	Eleventh-Grade Frequency	Eleventh-Grade Percentage	Chi-Square 0 vs. 1 vs. 2+
1. Seeks general signs of listener understanding					
Amount Score					
0	9	75%	10	40%	6.86*
1	3	25	9	36	
2	0	0	4	16	
3 or more	0	0	2	8	
2. Seeks specific signs of listener understanding					
Amount Score					
0	10	83	22	88	47.40**
1	2	17	2	8	
2	0	0	1	4	

N = 37

*p < .05; **p < .001

TABLE 3

THE SPEAKER'S HIGHEST LEVEL OF FEEDBACK MANAGEMENT

Highest Level Management Strategy Used	Frequency	Percentage	Chi-Square 0,1,2
None present	18	49%	7.19*
Seeks general signs of listener understanding	14	38	
Seeks specific signs of listener understanding	5	14	0,1 vs. 2 19.70**

N = 37

*p < .05; **p <.001

TABLE 4

GRADE-LEVEL DIFFERENCES IN THE SPEAKER'S HIGHEST LEVEL OF FEEDBACK MANAGEMENT

Highest Level Management Strategy Used	Seventh-Grade		Eleventh-Grade	
	Frequency	Percentage	Frequence	Percentage
None present	8	67%	10	40%
Seeks general signs of listener understanding	2	17	12	48
Seeks specific signs of listener understanding	2	17	3	12

N = 37

TABLE 5

AMOUNT OF LISTENER FEEDBACK MANAGEMENT

Total Number of Times Any Strategy Used	Frequency	Percentage	Chi-Square 0, 1+
0	10	27%	7.81*
1	7	19	
2	4	11	
3	4	11	
4	6	16	
5 or more	6	16	

N = 37

*p < .01

TABLE 6

GRADE-LEVEL DIFFERENCES IN THE AMOUNT OF LISTENER FEEDBACK MANAGEMENT

Total Number of Times Any Strategy Used	Seventh-Grade		Eleventh-Grade	
	Frequency	Percentage	Frequency	Percentage
0	5	42%	5	21%
1	3	25	4	16
2	0	0	4	16
3	2	17	2	8
4	2	17	4	16
5 or more	0	0	6	24

N = 37

TABLE 7

LEVEL OF LISTENER FEEDBACK MANAGEMENT

Highest Level Strategy Used	Frequency	Percentage
0. No Strategies Used	10	27%
1. Gives General Understanding	9	24
2. Asks for General Clarification	1	3
3. Asks for Specific Clarification	9	24
4. Verifies Understanding	8	22

N = 37

TABLE 8

GRADE-LEVEL DIFFERENCES IN LEVEL OF LISTENER FEEDBACK MANAGEMENT

Highest Level Strategy Used	Seventh-Grade		Ninth-Grade	
	Frequency	Percentage	Frequency	Percentage
0. No strategies used	5	42%	5	20%
1. Gives General Understanding	4	33	5	20
2. Asks for General Clarification	1	8	0	0
3. Asks for Specific Clarification	2	17	7	28
4. Verifies Understanding	0	0	8	32

N = 37

TABLE 9

FREQUENCY OF FEEDBACK STRATEGY USAGE

Strategy		Seventh Grade (N = 12)	Eleventh Grade (N = 24)
Speaker:			
1. Asks for General Signs of Understanding			
Frequency	0	75%	40%
	1	25	36
	2 or more	0	24
2. Asks for Specific Signs of Understanding			
Frequency	0	83	88
	1	17	8
	2	0	4
Listener:			
1. Gives General Indication of Understanding			
Frequency	0	42	40
	1	25	28
	2	25	8
	3	0	8
	4	8	4
	5 or more	0	12
2. Seeks General Clarification			
Frequency	0	92	92
	1	8	4
	2	0	4
3. Seeks Specific Clarification			
Frequency	0	83	44
	1	8	28
	2	8	8
	3 or more	0	20
4. Verifies Understanding			
Frequency	0	100	68
	1	0	20
	2	0	12

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